June 17th

Theodor Holm Nelson

Born: June 17, 1937;

Chicago, Illinois, USA

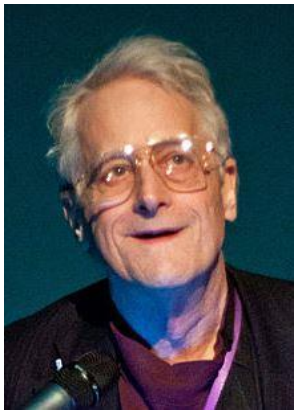
Nelson coined the terms hypertext, hypermedia, and hyperfilm in the paper he presented at ACM'65 in Cleveland, followed by his co-design of the first hypertext system, the Hypertext Editing System (HES; [April 18]) with Andries van Dam [Dec 8]. Nelson has also been credited with the words transclusion, virtuality, intertwingularity, popu-litism, and teledildonics.

His 1974 book "Computer Lib/Dream Machines" introduced many of these ideas to a wider audience. It's really two books, printed back to back, to be flipped between, and is perhaps the first personal computer book. It comes with the tagline: "You can and you must understand computers now!"

Nelson founded Project Xanadu, the first hypertext project, in 1960, and finally produced some working code in 1972. *Wired* magazine's article, "The Curse of Xanadu", published in June 1995, called it "the longest-running vaporware story in the history of the computer industry". It provoked a harsh rebuttal from Nelson.

Some people point to the Web as an example of the success of Nelson's ideas. However, Xanadu acolytes claim that the Web trivializes Nelson's model with one-way, easy-to-break links, with no management of versions or content. Indeed, the Web may have succeeded precisely because it was a seriously simplified version of a hypertext system.

Nelson was called "The Mad Poet of Computerdom" by *Playgirl* magazine in 1982, and designated their top bachelor and sex symbol of computing



Ted Nelson (2011). Photo by Dgies. CC BY-SA 3.0.

[June 1]. In 2001 he was knighted by the French, becoming an "Officier des Arts et Lettres" [Feb 27; June 8].

A quote: "Learning to program has no more to do with designing interactive software than learning to touch type has to do with writing poetry"

First Mobile Call

June 17, 1946

The first mobile telephone call was made from a car in St. Louis, Missouri using Bell System's Mobile Telephone Service (MTS). MTS was a pre-cellular radio system that linked to the Public Switched Telephone Network (PSTN), the land line service.

A team including Alton Dickieson and D. Mitchell from Bell Labs [Jan 1], and H. I. Romnes from Western Electric, had worked more than a decade to achieve this feat.

The equipment, of course employing vacuum tubes, weighed eighty pounds, filled much of a vehicle's trunk and drew so much power that it would cause the headlights to dim. At most, three subscribers could make calls at one time in any city; it was in effect a massive party line.

This service was used at least into the 1980's in large portions of North America, although it was upgraded as the Improved Mobile Telephone Service (IMTS) in 1964.

The first handheld mobile phone call was made by Martin Cooper of Motorola on [April 3] 1973.

The first commercial cellular network debuted in Chicago on [Oct 13] 1983.

ASCII Published

June 17, 1963

Work on the ASCII (American Standard Code for Information Interchange) standard began on Oct. 6, 1960, and the first version was published on this day. In Europe, it was known for a while as the Bemer-Ross Code due to the large contributions made by Bob Bemer [Feb 8] and Hugh Ross [Aug 31].

ASCII is structured into a list of four alphabets, each with 32 characters that fit into ASCII's seven-digit binary format. The first two digits denote the alphabet (00, 01, 10, 11) and the next five are used for the actual characters (00000 up to 11111).

The 00 alphabet is for commands, including End of Transmit Block, Carriage Return, and Escape. The 01 alphabet is for punctuation, starting with the space and followed by things such as the comma, ampersand & exclamation mark! The 10 and 11 alphabets are for the lower and upper case letters, with some punctuation marks thrown in to pad out the 26 letters to 32. Care was taken that the lower and upper case letters map to the same character positions in the two alphabets, to make it easy to switch between them.

The last character at 1111111 is Delete. At the time, data was commonly stored on paper tape, and punching out all seven holes for 1111111 was a perfect way to obliterate previous data.

Probably the Teletype Model 33 [April 00] affected the standard the most. In particular, the Model 33's codes 17 (Control-Q, aka XON), 19 (Control-S, aka XOFF), and 127 (Delete). XON is used to ask a sender to start transmitting data to the teletype, while XOFF requests that the sender stop.

The Model 33 later became infamous for being able to process a Control-G (BEL) literally, as the unit contained an bell which rang when that character was read.

Since 1963, ASCII has grown a lot. The first expansion was in 1985, when the European Computer Manufacturers Association (ECMA [Aug 13]) devised ISO-8859 which mapped ASCII to eight-digit binary. This made space for more Latin characters (such as those letters wearing hats) and math symbols (e.g. ¼, ½ and ¾).

When the 256 characters encoded by ISO-8859 started to feel a bit cramped, it was replaced by the enormous Unicode [Sept 2].

JOSS Begins

June 17, 1963

JOSS (JOHNNIAC Open Shop System) was one of the first time-sharing services, although it was predated by the CTSS [May 3] and PLATO II [Aug 22].

It was developed by J. Clifford Shaw [Feb 23] at RAND [Oct 1], and ran on the JOHNNIAC [Feb 00]. JOSS initially supported five consoles. One was next to the JOHNNIAC and four were placed in the offices of RAND staff selected to evaluate the system.

JOSS was sometimes called “The Helpful Assistant” for its conversational user interface. For instance, any command that was not understood elicited the response “Eh?” or “SORRY”.

The system was implemented in the EasyFox assembly language also developed by Shaw. Easy and Fox were the phonemes for E and F in the US military’s radiotelephony alphabet in use during WWII, up to the mid-1950's. The names Able to Fox were also widely used in the early days of hexadecimals to stand for A to F.

The second version of JOSS ran on the much more modern PDP-6 [Nov 00], and was operational by Feb. 1966. It was around 30 times faster, assigned five times as much storage per user, and could support four times as many consoles. By the end of 1970, there were 500 to 600 users at RAND and several Air Force sites.

Fabrice Bellard

Born: June 17, 1972;

Grenoble, France

Bellard is known for his open source projects, including FFmpeg, QEMU, and the Tiny C compiler. FFmpeg is a set of libraries for manipulating multimedia, and QEMU is a CPU emulator for several chips, enabling it to run a variety of OSes.

In 1997, Bellard discovered a new, faster formula for calculating single digits of π [March 14] in binary. On Dec. 31, 2009, he utilized his equation to calculate 2,700 billion decimal digits of the transcendental on a single PC. It held the World record until Alexander J. Yee & Shigeru Kondo shattered it by generating 5 trillion digits on Aug. 2, 2010.

Bellard has won the International Obfuscated C Code Contest twice [April 11].

Video Games Copyrighted

June 17, 1980

Atari’s [June 27] Asteroids and "Lunar Lander" become the first video games to be registered with the US Copyright Office.

Asteroids was designed by Lyle Rains, Ed Logg, and Dominic Walsh and released in Nov. 1979. It used vector graphics hardware developed by Howard Delman for "Lunar Lander", which had come out in August.

Asteroids soon overtook "Space Invaders" [June 5] in popularity in the US, and became Atari’s best selling arcade game of all time, with over 70,000 arcade cabinets sold.

"Lunar Lander" had a long history – the initial version was a 1969 text-based game called Lunar coded by high-school student Jim Storer. He wrote it in FOCAL (a language derived from JOSS [two entries back]) on a PDP-8 [March 22]. Later it was converted to BASIC by David H. Ahl [May 17], who included three versions of it in his 1973 book, "101 BASIC Computer Games".

Also in 1973, DEC commissioned a graphical version to showcase their new GT40 terminal. That version, by Jack Burness, was called Moonlander and was distributed with many DEC computers, and displayed widely at trade shows.

A DEC GT40 running Moonlander. Photo by Brouhaha. CC BY-SA 3.0.

Asteroids reached the law courts on Nov 27 1981. Stephen Holniker of Amusement World had released Meteors which Atari thought looked a little too much like Asteroids. However, the court eventually decided that there was no “substantial similarity", since any game based around the non-copyrightable idea of shooting rocks with a spaceship would have similar features.

Gilbert Hyatt's Patent

June 17, 1988

Gilbert Hyatt filed a patent entitled “Single Chip Integrated Circuit Computer Architecture”

based on work he'd begun in 1968. In it he claimed to be the inventor of a microprocessor pre-dating the TMX 1795 [Aug 31] and Intel 4004 [Nov 15] from 1971.

The patent was awarded in 1990 (US 4942516 A) with a priority date of Dec. 28 1970. It was later invalidated, but not before Hyatt had extracted substantial royalties (around $70 million) from various companies.

The invalidation was based on the fact that the device was never implemented, and indeed couldn't be implemented with the technologies available at the time of the invention. In particular, the Intel 4004, which Hyatt claimed copied his design, was only possible by using Silicon Gate Technology (SGT) to integrate the transistors. However, SGT was invented by Federico Faggin [Dec 1] at Fairchild Semiconductor [Oct 1] in 1968, and first utilized by Fairchild and Intel only in 1970.

The Spot Appears

June 17, 1995

The Spot (aka thespot.com) was the first online soap opera. As such, it's often been likened to "Melrose Place-on-the-Web". However, AOL's QuantumLink Serial [Nov 00] was probably the first online episodic fiction in 1988-89.

The Spot was started in June 1995 by Scott Zakarin, who had previously directed TV commercials for the Fattal and Collins advertising agency. He convinced the company to back his interactive fiction site, and also pioneered the underwriting of bandwidth and production costs by offering paid advertising banners on the Web pages.

The programme featured a rotating cast of attractive actors playing hip twenty-somethings who were renting rooms in a Santa Monica beach house called "The Spot". The characters maintained online diaries and posted photos and video. Also, the audience could email them, in the hope that their suggestions might become part of the storyline.

At its peak, the site was receiving 100,000 visits a day, and won one of the first Webby Awards [March 6].

First Flash Mob

June 17, 2003

The first flash mob formed at 7:27pm, lasting for ten minutes in the home furnishing section of Macy's department store in Manhattan. Roughly a hundred people attended the event after reading blog entries and text messages inviting people to come along. They were instructed to tell the Macy sales staff that they were members of a free-love commune looking to purchase a "love rug."

The occasion was organized by Bill Wasik, a senior editor of *Harper's Magazine*, who published an article about it in the March 2006 issue.

Wasik had already tried to organize a flash mob in May, but was unsuccessful after the targeted store was tipped off. An much earlier proto-flash mob was British artist Heath Bunting's King's Cross Phone-In, from [Aug 5] 1994.

"Flash mob" was added to the 11th edition of the Concise Oxford English Dictionary on July 8, 2004 where it was defined as an "unusual and pointless act".

Mozilla Download Day

June 17, 2008

Mozilla's [Jan 23] Download Day set a Guinness World Record for the most downloaded software application during a 24 hour period. From 6:16pm on June 17 to 6:16pm on June 18, Firefox 3 was downloaded 8,002,530 times. This despite Mozilla's US servers crashing for two hours at the start of the event.

Mozilla had unveiled their campaign to set the record on May 28, which had previously not existed as a category in the Guiness pantheon.

The event also included parties in more than 25 countries, and a 24-hour long celebration called Camp Firefox held at Mozilla's Mountain View headquarters.